R1.126 182.

--178. A method for transmitting data to selected remote computing devices, comprising the steps of:

transmitting data from an information source to a central broadcast server;

preprocessing said data at said central broadcast server;

transmitting preprocessed data to remote receivers communicating with said computing devices; and

instantaneously notifying said computing devices of receipt of said preprocessed data whether said computing devices are on or off.

R1.126 83.

179. The method claimed in claim 178, wherein said step of transmitting preprocessed data to remote receivers communicating with said computing devices, further comprises the step of:

wirelessly transmitting said preprocessed data to remote receivers.

R1.126 84.

180. The method claimed in claim 179, wherein said step of wirelessly transmitting said preprocessed data to remote receivers further comprises the step of:

transmitting said preprocessed data utilizing a paging network.

R1.126 85.

181. The method claimed in claim 179, wherein said step of wirelessly transmitting said preprocessed data to remote receivers further comprises the step of:

transmitting said preprocessed data utilizing a Vertical Blanking Interval.

R1.126 86.

182. The method claimed in claim 179, wherein said step of wirelessly transmitting said preprocessed data to remote receivers further comprises the step of:

transmitting said preprocessed data utilizing a satellite system.

R1.126 87.

183. The method claimed in claim 178, wherein said step of transmitting preprocessed data to remote receivers communicating with said computing devices, further comprises the step of:

transmitting said preprocessed data to remote receivers by wired transmission.

R1.126 ~88~.
~184~. The method claimed in claim 178, wherein said step of preprocessing data at said central broadcast server, further comprises the step of:

attaching to said preprocessed data an Internet address location of said preprocessed data for providing to said user an automatic connection back to said information source for obtaining further information related to said preprocessed data.

R1.126 ~89~.
~185~. The method claimed in claim 184, wherein said Internet address location is a Uniform Resource Locator.

R1.126 ~90~.
~186~. The method claimed in claim 184, wherein said step of attaching to said preprocessed data an Internet address location of said preprocessed data for providing to said user an automatic connection back to said information source for obtaining further information related to said preprocessed data, further comprises the step of:

providing an automatic connection back to said information source through an user activating a single function on said computing device.

R1.126 ~91~.
~187~. The method claimed in claim 185, wherein said single function comprises a single click on said computing device.

R1.126 ~92~.
~188~. The method claimed in claim 184, wherein said connection back to said information source for obtaining further information related to said preprocessed data is an automated wired connection.

R1.126 ~93~.
~189~. The method claimed in claim 184, wherein said connection back to said information source for obtaining further information related to said preprocessed data is an automated wireless connection.

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RI.126 _94._

~~190.~~ The method claimed in claim 184, wherein said step of attaching to said preprocessed data an Internet address location of said preprocessed data for providing to said user an automatic connection back to said information source for obtaining further information related to said preprocessed data, further comprises the steps of:

determining at said central broadcast server said Internet address location from said information source;

attaching said Internet address location to said preprocessed data;

transmitting said Internet address location with said preprocessed data to said computing device;

extracting said Internet address location from said preprocessed data at said computing device; and

displaying said Internet address location with said preprocessed data to said user such that said user can with a single click on said Internet address location obtain additional information from said information source.

RI.126 _95_

~~191.~~ The method claimed in claim 190, wherein said step of displaying said Internet address location to said user such that said user can with a single click on said Internet address location obtain additional information from said information source, further comprises the step of:

launching an Internet browser and passing said Internet address location to said browser for automatic connection back to said information source.

RI.126 - _96._

~~192.~~ The method claimed in claim 178, wherein said step of instantaneously notifying said computing devices of receipt of said preprocessed data whether said computing devices are on or off, further comprises the step of:

providing alert means which when activated allows display of data.

R1.126 97.
~~193.~~ The method claimed in claim 192, wherein said alert means comprises a visual alert.

R1.126 98.
~~194.~~ The method claimed in claim 192, wherein said alert means comprises an audio alert.

P1.126 99.
~~195.~~ The method claimed in claim 178, wherein said step of instantaneously notifying said computing devices of receipt of said preprocessed data whether said computing devices are on or off, further comprises the step of:

providing a dockable user interface alert panel on a display communicating with computing device for providing alerts to said user, wherein said alert panel is dockable on top of other applications.

R1.126 100.
~~196.~~ The method claimed in claim 195, wherein said step of providing a dockable user interface alert panel on a display communicating with computing device for providing alerts to said user, further comprises the step of:

displaying fly-in graphics and icon buttons to alert said user that new data has been received by said computing device.

R1.126 101.
~~197.~~ The method claimed in claim 195, wherein said alerts reflect type of information present at computing device.

R1.126 102.
~~198.~~ The method claimed in claim 178, wherein said step of preprocessing said data at said central broadcast server further comprises the step of:

deriving redundant data packets for transmission to said user.

R1.126 103.
~~199.~~ The method claimed in claim 198, wherein said step of deriving redundant data packets for transmission to said user further comprises the steps of:

parceling a data block into at least one incoming message;

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parceling said messages into k information packets;

selecting a number of parity-check packets p;

encoding column-wise with a modified Reed-Solomon code in accordance with:

$$g(x) = \prod_{l=1}^{P} (x + a^i)$$

for generating said parity-check packets; and

parceling said data packets into code words for transmission to said user.

200. The method claimed in claim 199, wherein said data packets include information packets and parity-check packets.

201. The method claimed in claim 199, wherein said step of deriving redundant data packets for transmission to said user further comprises the steps of:

performing error correction and detection on said code words after said data packets have been parceled.

202. The method claimed in claim 199, further comprising the step of:

assembling a data block from said code words.

203. The method claimed in claim 202, wherein said step of assembling a data block from said code words further comprises the step of:

counting the number of code words which have errors;

determining whether each packet has any errors;

saving packets without error;

discarding packets with at least one error; and

assembling a message when the required number of packets has been received.

RI.126   108.
~~204.~~ The method claimed in claim 178, wherein said step of preprocessing said data at said central broadcast server further comprises the step of:

combining Huffman compression and the dictionary-based compression based algorithms.

RI.126   109.
~~205.~~ The method claimed in claim 204, wherein said step of combining Huffman compression and the dictionary-based compression based algorithms further comprises the steps of:

scanning input texts;

searching for next item previously seen text;

searching for next item in a static Huffman dictionary;

choosing said search method which produces a better result for compression.

RI.126   110.
~~206~~ The method claimed in claim 205, further comprising the step of:

decompressing said compressed data.

RI.126   111.
~~207.~~ The method claimed in claim 178, wherein said step of preprocessing said data at said central broadcast server further comprises the step of:

utilizing a differencing algorithm for compressing said coded data, thereby significantly reducing the number of bytes sent with each transmission.

RI.126   112.
~~208.~~ The method claimed in claim 178, wherein said step of preprocessing data at said central broadcast server, further comprises the step of:

processing data in accordance with feed type from said information source.

RI.126   113.
~~209.~~ The method claimed in claim 208, wherein said feed type comprises binary type feeds.

RI.126   174.
~~210.~~ The method claimed in claim 208, wherein said feed type comprises common user information type feeds.

RI.126   115.
~~211.~~ The method claimed in claim 208, wherein said feed type comprises feeds for modifying registry keys which control processing of data.

RI.126   116.
~~212.~~ The method claimed in claim 210, wherein said step of processing data in accordance with feed type from said information source, further comprises the step of:

using tags to differentiate types of information.

RI.126   117.
~~213.~~ The method claimed in claim 178, wherein said step of instantaneously notifying said computing devices of receipt of said preprocessed data whether said computing devices are on or off, further comprises the step of:

instantaneously alerting said user to personal alerts through the use of sound, graphics, bit maps or video, wherein said user can instantaneously access information.

RI.126   118.
~~214.~~ The method claimed in claim 178, wherein said step of preprocessing data at said central broadcast server, further comprises the step of:

encoding said data with information relating to message parameters for filtering.

RI.126   119.
~~215.~~ The method claimed in claim 178, wherein said step of instantaneously notifying said computing devices of receipt of said preprocessed data whether said computing devices are on or off, further comprises the steps of:

monitoring said transmissions utilizing multiple viewers;

filtering said transmitted preprocessed data;

post processing said preprocessed data; and

notifying said user instantaneously of receipt of filtered postprocessed data.

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R1.126 *126.* ~~246.~~ The method claimed in claim 215, wherein said step of filtering said transmitted preprocessed data further comprises the step of:

filtering said transmitted preprocessed data in accordance with preferences set by said user.

R1.126 *121.* ~~247.~~ ·The method claimed in claim 216, wherein said step of filtering said transmitted preprocessed data in accordance with preferences set by said user, further comprises the step of:

setting said preferences with respect to sound, video and animation.

R1.126 *122.* ~~218.~~ The method claimed in claim 215, wherein said step of filtering said transmitted preprocessed data further comprises the step of:

filtering said preprocessed data in accordance with virtual addresses.

R1.126 *123.* ~~219.~~ The method claimed in claim 215, wherein said step of filtering said transmitted preprocessed data further comprises the step of:

filtering said preprocessed data in accordance with physical addresses.

R1.126 *124.* ~~220.~~ The method claimed in claim 215, further comprising the step of:

controlling said viewers from said central broadcast server.

R1.126 *125.* ~~221.~~ The method claimed in claim 215, further comprising the step of:

activating said preprocessed data at a scheduled time.

R1.126 *126.* ~~222.~~ The method claimed in claim 178, further comprising the step of:

modifying said preprocessed data instantaneously and wirelessly.

R1.126 *127.* ~~223.~~ The method claimed in claim 218, wherein said step of modifying said preprocessed data instantaneously and wirelessly, further comprises the step of:

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activating services wirelessly through activation codes which enable or disable services.

R.1.126 128.

~~224.~~ The method claimed in claim 216, wherein said step of controlling said viewers from said central broadcast server, further comprises the step of:
adding viewers from said central broadcast server.

R1.126 129.

~~225.~~ The method claimed in claim 220, wherein said step of controlling said viewers from said central broadcast server, further comprises the step of:
removing viewers from said central broadcast server.

R1.126 130.

~~226.~~ The method claimed in claim 215, wherein said step of postprocessing said preprocessed data, further comprises the step of:
recombining, decoding and decompressing said preprocessed data.

R1.126 131.

~~227.~~ The method claimed in claim 178, wherein said information source may be an Internet access provider providing data feeds.

R1.126 132.

~~228.~~ The method claimed in claim 178, wherein said information source may be an on-line service provider providing data feeds.

R1.126 133.

~~229.~~ The method claimed in claim 178, further comprising the step of:
displaying contextual graphics on said computing device to show data in a predefined format.

R1.126 134.

~~230.~~ The method claimed in claim 229, wherein said predefined format is a scoreboard.

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R1.126   135.
~~234~~. The method claimed in claim 178, wherein said step of preprocessing data at said central broadcast server, further comprises the step of:

attaching to said preprocessed data an Internet address location of said preprocessed data for providing to said user a message that causes a process or transaction on said computing device to occur.

R1.126   136.
~~232~~. The method claimed in claim 184, wherein said Internet address is a proprietary on-line addressing scheme.

R1.126   137.
~~233~~. The method claimed in claim 179, wherein said step of wirelessly transmitting said preprocessed data to remote receivers further comprises the step of:

transmitting said preprocessed data utilizing a FM subcarrier, digital, analog, cellular, GSM or PCS carrier.

R1.126   138.
~~234~~. The method claimed in claim 178, wherein said step of preprocessing said data at said central broadcast server, further comprises the step of:

sending said data on groups of pooled capcodes.

R1.126   139.
~~235~~. The method claimed in claim 234, wherein said step of sending said data on groups of pooled capcodes, further comprises the step of:

multiplexing data over multiple capcodes to be reassembled at said user as if data were sent over a single capcode.

R1.126   140.
~~236~~. The method claimed in claim 178, wherein said step of preprocessing said data at said central broadcast server, further comprises the step of:

assigning data packets to a group of capcodes;

transmitting said data over a paging network using said group of capcodes;

receiving packets at said user on said group of capcodes;

combining said packets from group of capcodes into one data message.

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237. A system for transmitting data to selected remote computing devices, comprising:

means for transmitting data from an information source to a central broadcast server;

means for preprocessing said data at said central broadcast server;

means for transmitting preprocessed data to remote receivers communicating with said computing devices; and

means for instantaneously notifying said computing devices of receipt of said preprocessed data whether said computing devices are on or off.

238. The system claimed in claim 237, wherein said means for transmitting preprocessed data to remote receivers communicating with said computing devices, further comprises:

means for wirelessly transmitting said preprocessed data to remote receivers.

239. The system claimed in claim 238, wherein said means for wirelessly transmitting said preprocessed data to remote receivers further comprises:

means for transmitting said preprocessed data utilizing a paging network.

240. The system claimed in claim 238, wherein said means for wirelessly transmitting said preprocessed data to remote receivers further comprises:

means for transmitting said preprocessed data utilizing a Vertical Blanking Interval.

241. The system claimed in claim 238, wherein said means for wirelessly transmitting said preprocessed data to remote receivers further comprises:

means for transmitting said preprocessed data utilizing a satellite system.

R.126 146.

242. The system claimed in claim 237, wherein said means for transmitting preprocessed data to remote receivers communicating with said computing devices, further comprises:

means for transmitting said preprocessed data to remote receivers by wired transmission.

R1.126 147.

243. The system claimed in claim 237, wherein said means for preprocessing data at said central broadcast server, further comprises:

means for attaching to said preprocessed data an Internet address location of said preprocessed data for providing to said user an automatic connection back to said information source for obtaining further information related to said preprocessed data.

R1.126 148.

244. The system claimed in claim 243, wherein said Internet address location is a Uniform Resource Locator.

R1.126 149.

245. The system claimed in claim 243, wherein said means for attaching to said preprocessed data an Internet address location of said preprocessed data for providing to said user an automatic connection back to said information source for obtaining further information related to said preprocessed data, further comprises:

means for providing an automatic connection back to said information source through an user activating a single function on said computing device.

R1.126 150.

246. The system claimed in claim 245, wherein said single function comprises a single click on said computing device.

R1.126 151.

247. The system claimed in claim 243, wherein said connection back to said information source for obtaining further information related to said preprocessed data is an automated wired connection.

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R1.126 .152.

248. The system claimed in claim 243, wherein said connection back to said information source for obtaining further information related to said preprocessed data is an automated wireless connection.

R1.126 .153.

249. The system claimed in claim 243, wherein said means for attaching to said preprocessed data an Internet address location of said preprocessed data for providing to said user an automatic connection back to said information source for obtaining further information related to said preprocessed data, further comprises:

means for determining at said central broadcast server said Internet address location from said information source;

means for attaching said Internet address location to said preprocessed data;

means for transmitting said Internet address location with said preprocessed data to said computing device;

means for extracting said Internet address location from said preprocessed data at said computing device; and

means for displaying said Internet address location with said preprocessed data to said user such that said user can with a single click on said Internet address location obtain additional information from said information source.

R1.126 154.

250. The system claimed in claim 249, wherein said means for displaying said Internet address location to said user such that said user can with a single click on said Internet address location obtain additional information from said information source, further comprises:

means for launching an Internet browser and passing said Internet address location to said browser for automatic connection back to said information source.

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CN.126

155.
~~251.~~ The system claimed in claim 287, wherein said means for instantaneously notifying said computing devices of receipt of said preprocessed data whether said computing devices are on or off, further comprises:
alert means which when activated allows display of data.

R1.126

156.
~~252.~~ The system claimed in claim 237, wherein said means for preprocessing said data at said central broadcast server, further comprises:
means for sending said data on groups of pooled capcodes.

R1.126

157.
~~253.~~ The system claimed in claim 252, wherein said means for sending said data on groups of pooled capcodes, further comprises:
means for multiplexing data over multiple capcodes to be reassembled at said user as if data were sent over a single capcode.

R1.126

158.
~~254.~~ The system claimed in claim 237, wherein said means for preprocessing said data at said central broadcast server, further comprises:
means for assigning data packets to a group of capcodes;
means for transmitting said data over a paging network using said group of capcodes;
means for receiving packets at said user on said group of capcodes;
means for combining said packets from group of capcodes into one data message.

R1.126

159.
~~255.~~ The method claimed in claim 185, wherein said single function comprises a single click on said computing device.

160.
~~256.~~ The method claimed in claim 255, wherein said computing device comprises a computer.--

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